WHAT IS CLAIMED IS:

- 1. A method of inhibiting melanin synthesis comprising contacting melanocytes with an amount of zinc alpha-2-glycoprotein (ZAG) sufficient to effect said inhibition.
- 2. A method of inhibiting melanin synthesis in a patient comprising administering to said patient an amount of ZAG sufficient to effect said inhibition.
- 3. The method according to claim 2 wherein ZAG is administered directly.
- 4. The method according to claim 2 wherein a nucleic acid sequence encoding ZAG is administered under conditions such that said sequence is expressed and ZAG is thereby produced.
- 5. The method according to claim 2 wherein ZAG is administered to the skin of said patient.
- 6. The method according to claim 2 wherein said patient suffers from increased or aberrant skin pigmentation.
- 7. The method according to claim 2 wherein ZAG is administered locally to the epidermis of said patient.

- 8. The method according to claim 2 wherein ZAG is administered systemically.
- 9. A composition comprising ZAG wherein said composition is in the form of a cream, gel or lotion.
 - 10. A sterile composition comprising ZAG and a carrier.
 - 11. A composition comprising ZAG in dosage unit form.